
ISDN QSIG Basic Call

Integrated Services Digital Network (ISDN) Q Reference Signaling Point (QSIG) Basic Call complies with the ISDN protocol that specifies that Layer 3 signaling requirement for support of circuit switched call control at the “Q” reference point between Private Telecommunications Network Exchanges (PTNXs) connected within a Private Telecommunications Network (PTN). This protocol has been adopted by the European Telecommunications Standards Institute (ETSI) and the International Standards Institute (ISO). Most of the major European PTNX manufacturers will be supporting ISDN connectivity based on this standard.

QSIG is oriented toward signaling and services that occur between two “peer-to-peer” switches across a “Q” reference point. For example, two PBXs, a PBX and a Centrex switch or two Centrex switches could exchange signaling and services across a “Q” reference point.

The ISDN QSIG Basic Call features introduces the following basic call services on Meridian 1 ISDN 1.5 MBit PRI on QSIG connectivities (these services were previously available only on ISDN 2.0 MBit PRI on QSIG connectivities, as introduced in Generic X11 Release 20):

- Basic Call Service
- 64 K clear bearer capability
- TIE call types
- Connected number delivery (COLP/COLR)
- Channel Negotiation
- Flexible numbering plan
- Enbloc dialing

— Calling Line Identification Presentation/Restriction (CLIP/CLIR)

Operating parameters

Meridian Customer Defined Network (MCDN) features cannot be interworked between an MCDN and QSIG interface, with the exception of basic call, Calling Line Identification Presentation/Restriction and Calling and Connected Line Presentation/Restriction.

Meridian 1 accepts up to three Progress Information Elements (IE) in one message on the QSIG interface.

QSIG is supported on 1.5 Mbps PRI on Option 11C via the downloadable D-channel daughterboard.

The maximum length of a ISDN message is limited to 260 bytes.

Only circuit mode connection is supported.

nB+D is not supported for QSIG.

Hardware requirements

For 1.544 Mbps PRI on Option 11C, the NTAK09 PRI card and the NTBK51 downloadable D-channel daughterboard are required.

Feature interactions

Backup D-Channel

Backup D-channel is not supported on the QSIG interface.

ISDN Signaling Link

ISDN Signaling Link (ISL) on QSIG operation is not supported on Option 11C.

Network Attendant Services

ISDN QSIG Basic Call interacts with Network Attendant Services (NAS) as if the call is going to a route without NAS being equipped.

Network Automatic Call Distribution

Network Automatic Call Distribution signaling is not supported on the QSIG interface. Network ACD operation on QSIG is the same as the existing Network ACD treatment for unsupported interfaces.

Network Call Redirection

When a call is terminated on the Meridian 1 and Network Call Redirection (NCR) is active, the QSIG Basic Call can still operate; however, the original called number and redirection number IE that are used by NCR will not be sent on the QSIG interface.

Network Call Trace

Network Call Trace is not supported on the QSIG interface.

Network Calling Party Name Display

Network Calling Party Name Display (NCPND) is supported within the Meridian Customer Defined Network only. When QSIG is involved in the call setup, the existing NCPDN operation on unsupported interface applies on QSIG.

Network Message Service

Network Message Service (NMS) is only supported on the Meridian Customer Defined Network. NMS operation on QSIG is the same as the existing treatment for unsupported interfaces.

Network Ring Again

Network Ring Again signaling is supported within the Meridian Customer Defined Network only. Network Ring Again requests which go through the QSIG interface will not be supported.

Remote Virtual Queuing

Remote Virtual Queuing (RVQ) does not operate on the QSIG interface. The existing RVQ operation on unsupported interface applies on the QSIG interface.

Trunk Route Optimization

Trunk Route Optimization (TRO) is supported within an MCDN network only. When a redirecting node sends a message to the originating node and the TRO request is accepted, the new call will go through the QSIG interface just as a normal basic call. However, TRO signaling will not be able to operate on the QSIG interface.

Virtual Network Service

A QSIG link can be used as a B-channel for the Virtual Network Service (VNS) over a private network. All VNS services are supported as normal. QSIG is only used as a speech bearer.

Feature packaging

ISDN QSIG Basic Call (QSIG) is package 263. The following packages are also required:

- International Primary Rate Access (IPRA) package 202;
- Digit Display (DDSP) package 19; and
- Integrated Services Digital Network (ISDN) package 145;

Feature implementation

LD 17 – Assign Configuration Record.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	ADAN	Action Device and Number.
- ADAN	CHG DCH x	Change input/output device.
...		
-- IFC	ISIG	Interface ID for ISO QSIG download table.
...		
TIMR	(NO), YES	NO = skip timer prompt. YES = change timer value.
T310	110 - (120)	The timer is used to define how long Meridian 1 can wait for the response message when the QSIG outgoing call is in an outgoing call proceeding state.

LD 16 – Define Route Data Block.

Prompt	Response	Description
REQ	NEW, CHG	New, or Change.
TYPE	RDB	Route Data Block.
...		
DGTP	PRI	Digital Route Type
IFC	ISIG	New DCH interface identification as entered in LD 17.

LD 97 – System Configuration.

Prompt	Response	Description
REQ	CHG	Change.
TYPE	SYSM	System parameters for Multi-purpose Serial Data Link (MSDL) or Multi-purpose ISDN Signaling Processor (MISP).
...		
FDLC	p1 p2 p3 p4	Fast download control parameters. p1 = Application will be set to PRIE or BRIE. p2 = Specifies conditional (C) or forced downloading (F). p3 = Specifies current (C), latest (L) and specified (S) version. p4 = xx (version number if p3 = S).

Feature operation

No specific operating procedures are required to use this feature.